Appendix 2: Site Utilities

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APPENDIX 2 SITE UTILITIES

Water Supply

The water supply for Lexington Technology Park is from the Massachusetts Water Resource Authority (MWRA) system. The project is supplied from a 12-inch main in Spring Street. The existing service main within Patriot Way is also 12-inch, and will remain in place. There is also an 8-inch main to the south and west of the 300 & 400 Patriot Way buildings. Currently this 8" main is dead ended near the property line between 200 and 300 Patriot Way, south of 300. This 8-inch pipe is designed to extend through the 200 Patriot Way site and reconnect with the 12-inch main to form a loop. This 8-inch loop is dedicated for fire hydrants and as a redundant supply main for the property.

New fire protection and domestic water services for 200 and 600 Patriot Way will connect to the 12-inch service main in Patriot Way. 100 Patriot Way will be serviced from the southern loop.

125 Spring Street is serviced directly by an 8-inch service tapped from the main in Spring Street.

The current water supply system is capable of supplying the proposed buildings on site with both the daily water demands and emergency fire protection loads.

Wastewater

The site is served by a gravity sewer line that flows from the east to the northwest across the site. Starting at 125 Spring Street, the sewer main currently runs through the 200 Patriot Way site and then along the south of 300-500 Patriot Way and extending to Weston Street at the northwesterly property line. On site the main is a 10-inch pipe, and off-site at Weston Street the diameter increases to 14-inch and then to 18-inch, as the gravity line continues to a pump station at Valley Road. From there the flow is pumped to the Lexington Interceptor which continues easterly through the MWRA system ultimately to the Deer Island Waste Water Treatment Plant.

The existing system has adequate hydraulic capacity for the anticipated demands. Under proposed conditions the existing 10-inch gravity sewer will be retained with new service connections from 100, 200 and 600 Patriot Way. An inspection of the 10-inch line has been conducted as part of the approval process with the Town of Lexington for 400 Patriot Way, and the pipe appears to be in good condition.

Electrical

Patriot Partners and their consultants have been working with NSTAR throughout the design and construction phases of the site's development. NSTAR has stated they have the capacity in the existing circuits for the demand at B400 in addition to the current existing building demands.

NSTAR noted that an additional circuit may be needed to be brought to and provided in Spring Street for the future buildings.

125 Spring Street is served from a separate circuit off of Spring Street.

Gas

The site is currently served by a 3-inch medium pressure main in Patriot Way, which transitions to a 4-inch main from B300 to B500. This main will continue to serve B300 and B500, and will also serve B600.

A new 6" high pressure main is currently being installed along the Route 2 edge of the property from Spring Street to B400. This main will serve B400 and also B100 and B200 in the future.

125 Spring Street is served separately from Spring Street.

Stormwater

A stormwater design was completed for the site and a Notice of Intent was filed in September of 2007, An Order of Conditions was issued on February 20, 2008. This Notice of Intent included 200 and 400 Patriot Way and the redevelopment of 300 Patriot Way. 400 Patriot Way is currently in construction under the OOC.

The detention structures designed for the master plan build out under the existing DSDUP are being completed as part of the 400 Patriot Way project.

The addition of 100 Patriot Way and its associated parking will utilize the previously designed and constructed stormwater infrastructure, but would likely increase impervious area and require a new Notice of Intent filing.

The proposed 600 Patriot Way building and parking garage are located in the central portion of the site adjacent to 500 Patriot Way. Both 600 Patriot Way and the garage are located on existing pavement areas now associated with 500 Patriot Way, which is intended to minimize the impacts of the development on the stormwater system and the adjacent wetlands.

The development of 600 Patriot Way will require a new Notice of Intent and construction of a stormwater management system in compliance with the Stormwater Management Standards.

Estimated Utility Loads for LTP

Building	Water Demand (gpd)	Wastewater Discharge (gpd)	Electrical - Connected Load (KVA)	Electrical - Demand Load (KVA)	Gas - Connected Load (cfh)
125 Spring Street	13,550 gpd	13,550 gpd	1,350 KVA	800 KVA	5,500 cfh
100 Patriot Way	19,125 gpd	19,125 gpd	5,000 KVA	3,000 KVA	50,000 cfh
200 Patriot Way	21,200 gpd	21,200 gpd	4,000 KVA	2,400 KVA	50,000 cfh
300 Patriot Way	26,850 gpd	26,850 gpd	3,500 KVA	2,100 KVA	36,650 cfh 3,103 cfh
400 Patriot Way	209,320 gpd	119,695 gpd	6,234 KVA	4,123 KVA	57,152 cfh
500 Patriot Way	7,500 gpd	7,500 gpd	2,500 KVA	1,500 KVA	20,000 cfh
600 Patriot Way	9,090 gpd	9,090 gpd	2,500 KVA	1,500 KVA	25,000 cfh
Patriot Way Total	306,635 gpd	217,010 gpd	25,084 KVA	15,423 KVA	247,405 cfh